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SCHOOL BUILDING PROJECTS, A GUIDE TO ADMINISTRATIVE PROCEDURES.

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THIS GUIDE PROVIDES STEP BY STEP ASSISTANCE TO THOSE RESPONSIBLE FOR A SCHOOL BUILDING PROJECT. THE RESPONSIBILITIES OF THE BOARD OF EDUCATION AND THE SCHOOL STAFF ARE EDUCATIONAL PLANNING AND MAKING STUDIES OF THE SCHOOL POPULATION. ADVISORY SERVICES ARE PROVIDED BY THE STATE EDUCATION DEPARTMENT. THE FOLLOWING STEPS ARE AMONG THOSE CITED AS BEING IMPORTANT. CONVERSION OF EDUCATIONAL PLANS INTO WORKING DRAWINGS IS THE RESPONSIBILITY OF THE ARCHITECT. SINCE HE ALSO GUARDS THE BOARD AGAINST DEFICIENCIES IN WORKMANSHIP, CAREFUL ATTENTION MUST BE GIVEN BY THE BOARD TO HIS SELECTION AND EMPLOYMENT. SUPPORTIVE SERVICES FROM THE ENGINEERING AND LEGAL PROFESSIONS MAY HAVE TO BE CAREFULLY CONSIDERED. UPON COMPLETION OF THESE STEPS, THE BUILDING PROJECT MUST PROCEED TO SITE DETERMINATION, PRELIMINARY PLANS, DISTRICT APPROVAL, FINAL PLANS, AND BIDDING PROCEDURES INCLUDING AWARDING OF BIDS. SUPERVISION OF THE CONSTRUCTION PROCESS AND INSURANCE COVERAGE MUST BE PROVIDED. PROCEDURES FOR HANDLING CHANGE ORDERS MUST BE ESTABLISHED. WHEN CONSTRUCTION HAS BEEN COMPLETED, THE BOARD OF EDUCATION MUST INSPECT THE FACILITIES FOR FINAL ACCEPTANCE. THIS FOLLOWS THE ISSUANCE OF THE CERTIFICATE OF FINAL APPROVAL BY THE ARCHITECT. PLACING THE BUILDING IN USE IS THE FINAL TASK. (RH)

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School Building Projects

A Guide to Administrative Procedures

PRELIMINARY PLANS

Educational Planning

Clerk of the Works

School Board Responsibility

District Meeting

Selection of Architect

Bidding

Final Acceptance

Engineering Services

Addenda and Change Orders

Insurance

FINAL PLANS

Placing the Building in Use

EF000544

Supervision

Legal Services

THE UNIVERSITY OF THE STATE OF NEW YORK/THE STATE EDUCATION DEPARTMENT
DIVISION OF EDUCATIONAL FACILITIES PLANNING/ALBANY – 1966

School Building Projects
A Guide to
Administrative Procedures

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
DIVISION OF EDUCATIONAL FACILITIES PLANNING
ALBANY 12224

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Introduction

Many school districts are considering school building programs for the first time in the experience of the present board members and administrative staff. The material presented in this guide is intended primarily for those of little experience but should be of value to any school official contemplating expansion of the school plant.

An attempt has been made to indicate the functions and responsibilities of those who will share in the project. The presentation is intentionally brief, and those who wish further information on any particular phase of the problem will find more details in some of the books and periodicals listed as references.

There is only limited reference in the body of the guide to the processing of school building plans through the State Education Department. This subject has been covered in detail in an Education Department leaflet, *The Advancement of Plans Through the Division of Educational Facilities Planning.* This leaflet will be found in appendix IVa.

The guide takes up certain legal aspects of the advancement of a building program and includes excerpts from certain laws. It must be realized, however, that the guide was not written as a legal document, and consequently that it is far from being an all-inclusive, comprehensive treatise on legal requirements for school building projects. In no sense can the guide be considered a substitute for employment of legal counsel and careful study of the Education Law and other laws relating to the advancement of public work projects. Since the guide was prepared for this State, all legal requirements mentioned are those of New York State.

Dr. Lyle L. Morris, formerly superintendent of schools at Northport and Huntington, N.Y., and now professor of educational administration at Hofstra College, prepared the original manuscript for the guide. It has been recently revised by the staff of the Division of Educational Facilities Planning. During the revision, conferences were held with Department legal advisors. In its fundamental concepts there have been few changes. The revisions intend primarily to place greater emphasis on important points and to spell out policies and proper procedures.

WILLIAM B. HAESSIG, DIRECTOR
Division of Educational Facilities Planning

Educational Planning

The successful and satisfactory development of a school building program depends upon thorough planning. The first responsibility rests upon the board of education and the school staff. To secure a building that will be satisfactory during the years that it will be used, the school authorities must do much before any plans are prepared or an appropriation is voted.

The first phase of school building planning is the development of an educational program for the present and the foreseeable future. The superintendent, working with his teachers or with a committee of teachers, should initiate the necessary study by early discussion of the educational program presently followed and of the program which will meet the needs of the future. After the preliminary outlining of the problem, it is desirable to enlarge the committee by the inclusion of representative laymen. There will be value in the contribution these laymen may bring from their own experience, but equally important will be their value as interpreters to the public as the project develops.

The type of educational program and its extent must be decided. Will it include nursery schools, kindergarten, and adult education? Will there be a junior high school unit or a 6-year high school? Will there be provision for vocational education? These and many similar questions must be answered.

Whether members of the board of education have participated in these preliminaries or not it will be necessary for the board to approve any proposed program.

A second phase of the development will be a study of school population, present and future.

With the program decided upon and enrollment figures obtained, building facilities required to meet these needs can be determined. Present facilities with or without modification may serve a part of the needs. Building space in the form of additions to old structures or of new structures may be required to house the expanded program or the increased enrollment.

School Board Responsibility

It is the duty and responsibility of the local school board to:

1. Determine both immediate and long-range educational policy and program of the school district.
2. Study with the Division of Educational Facilities Planning the educational program for individual schools and individual areas served by a school or schools.
3. Determine and execute the plan for financing school building construction.
4. Provide architectural and engineering services.
5. Carry out the construction of school building projects.
6. Provide adequate supervision through the architect of all construction, including additions and renovations.

Education Department Services and Responsibilities

The State Education Department is charged by law with the protection of the life and health of students, in addition to other obligations in connection with the educational system of this State.

1. The Commissioner's approval is required for all public school building projects in which the cost exceeds $100,000. For those cities whose population is over 125,000 the Commissioner will accept outline plans and specifications for review and approval. These must be submitted for all projects costing more than $100,000. For projects costing less than $100,000 such outline plans and specifications need be filed only if application is being made for building aid. The plans required in order to determine capacity for building aid purposes will be accepted for the outline plans.
2. The Commissioner's approval signifies only that plans and specifications of school buildings meet the minimum requirements of sections 408 and 409 of the Education Law, the Commissioner's regulations, and the policies of the Division of Educational Facilities Planning relating to educational requirements, heating, ventilating, lighting, sanitation and health, fire and accident protection, and that the site meets the minimum requirements of section 408. It does not signify approval

of architectural or structural design, nor choice of building materials nor of any contract which may be awarded or executed nor of any features which go beyond the aforesaid minimum requirements, such as separate auditoriums, swimming pools, expansive foyers, unnecessary exterior ornamentation, decorative features and other similar items.

3. Services relating directly or indirectly to the building program include district reorganization (Bureau of School District Organization); program planning (Divisions of Curriculum Development and of School Supervision); financial planning (Division of Educational Management Services); State building aid (Division of Educational Finance); school planning, construction, and safety (Division of Educational Facilities Planning).

The Division of Educational Facilities Planning of the State Education Department is prepared to offer many helpful services through its staff of educators, architects, and engineers who offer a wide range of advisory assistance to school districts throughout the State.

School districts who make use of these advisory services save many thousands of dollars every year. Due to the Division's statewide range of activity, it acts somewhat as a nerve center, registering the good and bad experiences of school districts throughout the State as they strive to cope with today's problems. Staff members are alert to learn about new trends and movements—both from current technical papers and periodicals and from the current thinking of other educators and architects as expressed by them on their visits to the Division's office.

School officials confronted with building needs should contact the Division of Educational Facilities Planning for consultation before detailed planning is undertaken. In this way, costly mistakes and delays may be avoided. The Division is staffed and equipped to help in the formation of long-range programs, to assist in the selection of sites, to make suggestions on effective utilization of site areas, and to help in the basic planning of the building and its facilities.

Staff members of the Division of Educational Facilities Planning are meeting with school boards, school principals, and architects or engineers almost every day in the year in Albany or, when circumstances require, in district offices.

In accordance with existing laws and regulations, the Division of Educational Facilities Planning approves school sites; establishes room and space schedules to house a proposed educational program; reviews preliminary plans (including studies of special room lay-

outs); prepares and distributes newsletters containing timely information on planning, on fire safety requirements and recommendations, on new construction techniques, and on new interior finishes. Through newsletters it reports regularly on the median costs per square foot for K-6, 7-9, and 10-12 school buildings.

The Division also administers a fire safety program involving review of over 3,500 fire safety reports, the carrying on of an extensive correspondence, and the taking of many field trips because of districts' invitations for personal inspections by the Division's fire safety coordinator. The work of this section is now further augmented by the inclusion of all college buildings of the State University of New York.

The Division determines the school building capacities for the apportionment of State building aid where applicable; reviews and checks final plans and specifications for agreement with the preliminary drawings and conformance to existing laws, codes, and regulations; advises on maintenance, repair, or reconstruction problems; conducts research on improved construction techniques and materials; and also maintains records on school building projects for purposes of analysis and for the compilation of those reports required by law.

The Division of Educational Facilities Planning issues the Commissioner's approval on new schools, school additions and/or alterations, on school administration buildings, school bus garages, and may also issue approval on those public libraries* which have been established by the electors of a school district.

Architectural† Services and Responsibilities

The architect's professional services consist of the necessary conferences, the preparation of preliminary studies, working drawings, specifications, large-scale and full-size detail drawings for architectural, structural, plumbing, heating, electrical, and other mechanical work; assistance in the drafting of forms of proposals and contracts; the issuance of certificates of payment; the keeping of accounts, the general administration of the business, and supervision of the work.

The architect will endeavor to guard the board against defects and deficiencies in the work of contractors, but he does not guarantee the performance of their contracts. The supervision of an architect is

* For further information on libraries, see Appendix VI.
† Wherever the term architect is used, the term engineer may be substituted.

to be distinguished from the continuous personal superintendence to be obtained by the employment of a clerk of the works.

When authorized by the board, a clerk of the works acceptable to both owner and architect shall be engaged by the architect at a salary satisfactory to the board and paid by the board, upon presentation of the architect's monthly statements.

When requested to do so, the architect will furnish preliminary estimates on the cost of the work, but he does not guarantee the accuracy of such estimates.

Aside from any legal responsibility or liability, an architect can be expected to:

1. Discuss and confer with representatives of the district on matters relating to the program as to requirements, existing facilities, possible new construction or additions or alterations, type of program district can afford, estimate of time required to implement architectural phase of planning and construction.
2. Establish and continue liaison with the State Education Department through the school superintendents or district superintendents and/or supervising principals and the Division of Educational Facilities Planning.
3. Advise on sites in relation to adaptability to program, desirability, and initial and ultimate development cost.
4. Provide accurate, complete, and studied plans incorporating materials and methods of construction which have proved to be desirable or, if new materials or techniques are to be used, advise the district of the possible advantages or disadvantages.
5. Provide carefully studied cost estimates of the proposed program.
6. Confer periodically and frequently with the board of education during the preparation of final plans, in order that the board and local school authorities will be familiar with the development of the plans and the special facilities contained therein.
7. Recommend awards only to responsible bidders. A responsible bidder is defined as one who possesses sufficient capital resources, skill, judgment, integrity, and moral worth.
8. Furnish regular and frequent supervision through members of his staff and engineering consultants. Cooperate with a full-time experienced clerk of the works insisting on immediate correction of inferior workmanship and materials, withholding payments until the work is corrected.
9. Make final inspection with board of education and contractors to:

a. Follow through on final adjustments, items of work to be corrected, or allowances to be made.
b. Certify that the work has been completed in accordance with approved plans and specifications.

10. Visit completed project occasionally to advise on maintenance, care, and repair.

Selection of Architect

The architect should be employed at the inception of the building study so that he may have opportunity to understand fully the problems to be met. When building needs have been determined, the architect becomes the key figure in carrying out any project.

An architect should be selected with the same care and method employed in appointing any specialist, such as a physician, lawyer, or superintendent of schools. Architecture is a profession, and employment should be on a professional basis, with due regard to loyalty, integrity, competency, office organization, personality, and experience. Board members and school staff personnel should visit school buildings erected in recent years. The Division of Educational Facilities Planning can give assistance in locating good school structures for inspection. In visiting buildings, there should be no expectation that one will be found to meet exactly present needs. New developments in school planning keep pace with developments in other fields. What may have been an excellent plan some years ago probably would not meet present-day thoughts of educators or architects.

When visiting buildings, questions should be asked of board members, superintendents, principals, teachers, and custodians:

Is the building satisfactory?

What faults have been found?

How did final costs compare with original estimates?

Did the architect show willingness to consider suggestions and did he follow adopted suggestions successfully?

Does the structure allow for efficient and economical operation and maintenance?

Was the architect professional, ethical, and businesslike in his relations with the school board, administrators, contractors, and material men?

Does he have the qualities of leadership and personality required for getting things done satisfactorily and on time?

Other things to consider:

Does the architect have the organization and staff an architect should have for a project of this size; are they available for this project or committed to a great deal of other work?

Does the architect have a reputation for complete and accurate plans and specifications, which are so necessary to the furnishing of lump sum bids by contractors?

As a result of visits to other buildings, it may be possible to make a tentative selection or, if not, the number of architects to be considered may be limited to three or four. The board should then consult with the one or more under consideration. Ample time should be allowed for conference with each architect, and there should be full opportunity for him to explain the services of his office and to show some of his work. It is not wise to have more than one architect appear for an interview at the same meeting.

An architect should not be selected because of local residence, friendship with a board member, or the artistry of his sketches. He should not be required to give cost estimates prior to the time he has been employed, knows the problem to be met, and has prepared preliminary sketches.

Competition on the basis of drawings is not recommended, even though the competition code of the American Institute of Architects is followed. The practice of architecture encompasses many functions other than the making of a beautiful drawing. Competition on the basis of fees to be charged is contrary to the standards of the architectural profession. One who proposes to violate the code of his own profession is a questionable risk.

An architect with little or no experience in school building planning must be judged by his record and reputation in other fields of architectural planning. If he has proved to be competent, resourceful, and imaginative in these fields, if he is willing and eager to learn, and if he will cooperate closely with the local and State school officials, he should not be ruled out solely because of his lack of experience. To hold otherwise is to make a closed corporation of school building planning.

A recommended standard form of questionnaire for selection of architects for school building projects has been prepared by the National Council on Schoolhouse Construction and the American Institute of Architects. Copies of this form are available from the Secretary, National Council on Schoolhouse Construction, 409 Education Building, Michigan State University, East Lansing, Michigan 48823.

Architect's Contract

The relationship between the board of education and the architect should be formalized by a written agreement, as soon as the board has selected an architect. In this connection, the board should consult their attorney before agreeing to accept any standard form of contract prepared by the American Institute of Architects or anyone else. The attorney should explain the terms of such forms to the board and suggest alternatives or additions, as required by the board.

Since the architect will do considerable work in the preparation of preliminary plans and estimates before it is possible to vote on the proposition, it is desirable and strongly recommended that provision be made in the contract for payment for this preliminary work, even though the vote may be unfavorable. The legality of such appointment and payment therefor to the extent that it is reasonably necessary to provide the information for submission to the voters and therefore may be regarded as ordinary contingent expenses has been established by the Division of Law, State Education Department[1] (Education Law, section 2023). Budget provision for such payment should have been made; if this was not done, it may be necessary to issue budget notes.[2] The architect is entitled to be paid for work done and should not be expected to prepare the preliminary plans and prepare for the district meeting with payment contingent upon a favorable vote and the carrying through of the project.

The second part of the contract covering final plans and specifications, award of contracts, and the construction of the building must be upon a contingent basis, as this will not be carried through without a favorable vote.

Since it is possible that there will be one or several unfavorable votes, it is necessary to include a termination clause in the contract. If attempts to secure approval of the building proposition extend over 2 or 3 years, there may be a change in the personnel of the board and the new board and the architect may not be in agreement. A provision in the contract should be made whereby in such or similar circumstances the contract can be terminated and payment made for services already performed.

The contract should be definite in regard to rate and time of pay-

[1] In case of dispute as to what constitutes "ordinary contingent expense," determinations shall be made by the Commissioner of Education.

[2] Legal advice should be obtained as to limitations on issuance of budget notes.

ments as well as to the services the architect should perform. This tends to prevent future misunderstanding.

Included in the services to be performed are the preparation of preliminary drawings, working drawings, specifications and large-scale detail drawings, the drafting of forms and proposals, the taking of bids and the preparation of contracts, the checking of shop drawings prepared by the contractor, the issuance of certificates of payment, and the general administration of the business and supervision of the work.

The board of education is expected to provide all necessary test borings, topographic maps, boundary surveys, percolation tests, locations of utilities, water wells, and similar information as may be required.

If the architect is to design or specify the equipment for the building, this arrangement should also be in the contract. If he does not select the equipment, he should be kept informed at all times regarding the equipment plans as they will affect his work and that of contractors who will provide any necessary service connections. Cost of equipment is usually a part of the building budget, and since the architect must keep within the budget, he must know equipment costs.

Some equipment must be planned either by the architect or by the board in close cooperation with him. Fixed or built-in equipment such as corridor lockers, auditorium chairs, cafeteria equipment, and laboratory furniture must be planned along with the space in which the equipment is to be placed. Design and color of equipment and of the room in which it is to be used are interdependent. Unnecessary costs and poor matching of finishes and arrangement may come through lack of cooperation between the architect and the board. The color and finish of the classroom seating may well influence the choice of finishes for the classroom walls, ceiling and trim.

The knowledge and maintenance experience of the superintendent of buildings and grounds could also prove of value in the early stages of equipment planning.

The architect may be in position to provide plans for landscaping and site development. If this is the case and the board wishes to have him assist in this work, it should be so stated in the contract. Even though he does not provide plans and specifications for this work, he should be furnished complete information as it is planned by others. The finished project will be more pleasing and effective if landscaping and site development are planned with the building.

The contract may also indicate the number of sets of plans and

specifications to be provided within the established fee. While a deposit must be required on the part of the bidder for the return of plans, all deposits from bidders should be refunded after contracts have been awarded and plans have been returned. Partial reimbursement may be made to nonbidders (General Municipal Law, section 102).

It is desirable to have an approximate time schedule for completion of the several phases of the project. This will indicate the amount of time to be allowed for development of preliminary plans and preparation for the district meeting, as well as the time required for completion of plans and securing of bids for construction, and the estimated construction time. It will not be possible for the architect to be wholly accurate in presenting such a schedule, but the board of education should know that the work will progress without undue delay. If the architect has so many projects under way that delay on the local work may be expected, this condition should be understood by all concerned.

Engineering Services

The current form of contract recommended by the American Institute of Architects provides that engineering services (structural, heating and ventilating, electrical, and plumbing) shall be included in the architect's regular fee.

In modern structures the structural, heating, ventilating, air-conditioning, electrical, and plumbing work is becoming increasingly detailed and complicated and may exceed half of the building construction cost. It therefore is most important that this phase of the work be handled by professional engineers. These engineers may be on the architect's staff or he may engage consulting engineers to work interprofessionally with him. In either case, the service is part of the architect's fee.

The school board should know, in advance of the actual contract signing with the architect, the names of the engineers he plans to use on their project. It is recommended that a board of education decline to approve the employment of any engineer who has any commercial connections, as no such engineer can be truly independent.

The engineering design of certain projects may be more complicated than usual, such as in the design of a thin shell structural system or the design of a large heating and air-conditioning installation. Remodeling work, additions, and alterations to existing buildings are usually much more involved; for these an architect must charge an additional fee—a fee which should be agreed upon in advance.

When the project largely involves heating, ventilating, air-conditioning, plumbing, sewage disposal, electrical work, or structural work, the board should retain a professional engineer who in turn will, if required, obtain professional architectural assistance.

Legal Services

Legal counsel will be required for some phases of a building project and may be desired on others. A local attorney should be retained, one who has the time and willingness to attend meetings and conferences as required and to advise the board as necessary.

Legal problems involved in the acquisition of a site will be more or less complicated depending upon conditions. If the simple purchase of a site is involved, there will be the matters of contract to purchase, title clearance, drawing of deed, recording of deed, and such comparable problems. If, however, condemnation proceedings are necessary, there will be much more work required of the attorney.

Bonding attorneys should be retained before the call of the district meeting in order that all notices, resolutions, and votes be in accord with bond sale requirements. The selection of bonding attorneys is important for two reasons. First, attorneys accustomed to handling bond issues will prepare all required resolutions, ballots, advertising and other documents to assure the legality of each step in the program. Second, the standing of the attorneys with bond buyers will assure the school district that prospective bidders will accept the information provided and enter the best bids possible.

The local school attorney may make the contacts with the bonding attorneys and provide liaison between the board and the attorneys. If the selection of the bonding attorneys is made early and with proper care, the local attorney will have little work with the bond issue under ordinary circumstances.

Competent advice should be secured from bonding attorneys and possibly from an unbiased bond buyer as to the time for, and the conditions of, the sale of the bonds. It will be necessary to see that the advice does not prejudice the sale in favor of particular bond buyers. The proper timing of a sale in relation to other issues being offered, sometimes at a considerable distance, may affect the bids and the price considerably. In general, a time for the sale should be selected that is removed by at least a few days from the sale of any other large issue.

The law requires that the award be made first upon the low interest rate. If two or more bidders quote the same lowest rate, the award

will be made to the one offering the highest premium (Local Finance Law, section 59.00).

The rating given a school district bond issue by a service such as Moody's or Dun and Bradstreet is most important in achieving a successful sale. Local school authorities should, therefore, cooperate fully with such services and with bonding attorneys in supplying all information requested.

The Education and Local Finance Laws give the requirements as to deposit and custody of proceeds of the bond sale. The funds must be deposited in a special account, and any balance remaining after the completion of the project must be retained for retiring the bonds as they come due and for paying interest on the bonds (Local Finance Law, section 165.00).

The architect should prepare advertisements for construction bids, advise the board regarding bids and bidders, and assist in drawing up contracts for construction. Standard forms of contracts will probably be used. The board should have its attorney examine and approve these advertisements and contracts.

In engaging legal services it is desirable to have complete understanding of services to be performed and the fees to be paid. The cost of legal services is a part of the cost of the project and is included in the building budget submitted with the plans to the Division of Educational Facilities Planning.

Fees vary somewhat with the locality and with the size of the project. In general, the fees of bonding attorneys are based upon a percentage of the amount of the bond issue; the amount of the fee may also vary with respect to the number of propositions involved or if the particular financing presents some unusual problems.

Site Determination

The architect and his engineering consultants should be selected ahead of the site determination. Their services should be used in evaluating the factors affecting the relative merits of the various sites under consideration. The following items should be investigated and properly evaluated:

1. Load-bearing ability of the soil, affecting foundation cost.
2. Percolation rate of soil, affecting cost of sewage disposal.
3. Availability of water, gas and electric services.

Preliminary Plans

Before drawing the preliminary plans for the building, the agreed schedule of requirements should have been formulated.[3] This will include the number of classrooms, special service rooms; the space requirements for these rooms and for administrative offices, storage space, custodial working space, and any other special features desired.

If the architect has been a participant in the educational planning, he will have a good understanding of the purposes for which all space is to be used. If, however, he is selected after the preliminary studies have been completed, conferences should be held to acquaint him with the entire educational program to be housed. The architect should not be expected to make adequate provision for educational services without complete understanding of the program.

After the architect has completed preliminary plans and prepared estimates of cost, he will present them for approval of the superintendent and board of education. These plans and estimates will then be submitted for the approval of the Division of Educational Facilities Planning, at which time the student capacity will be determined. Copies of application forms may be secured from the Division.

The various elements of cost are listed in the application for the "Examination and Approval of Preliminary Plans" (Form EFP-P.). All these cost factors taken together become the basis of the appropriation for the construction of the building and the issuance of bonds to finance the project. It is important that the estimates be as accurate as possible in order that the funds voted will permit completion of the building project, the purchase of equipment, the development of the site, and the payment of professional and incidental services.

District Meeting

A favorable vote at a district meeting depends upon various intangible factors, and it is seldom possible to predict the outcome with certainty. It is generally considered good practice to keep the voters fully informed from the beginning of the project, answering questions as they arise. There should be complete information as to needs, the proposed building to meet these needs, and the cost. Some districts prepare and distribute printed and well-illustrated material

[3] See Appendix IVa: *"The Advancement of Plans for Major Projects Through the Division of Educational Facilities Planning"*.

showing present inadequate facilities and proposed new structures. Enrollment figures are given with predictions for the future. There must be full coverage of cost factors including school operating costs, bond amortization, and tax rates.

The Division of Educational Management Services of the State Education Department assists in making a thorough study of the finances of a district and in projecting the budget for about 5 years in advance. A contemplated bond issue is adjusted to the present bond redemption program, and a schedule of payments is worked out to equalize the debt service budget over the life of the issue. In the budget projection increased costs due to additional teachers, salary increases, and higher operation and maintenance costs due to new building are taken into consideration.

If the local school authorities wish to develop the financial program, the Division of Educational Management Services is prepared to provide guidance and to review the study upon its completion.

Anticipated budget figures and tax rates are important to the voters who will be asked to approve a proposed bond issue.

If the planning for the project has included representative laymen, they may assist greatly in the essential publicity for the district meeting. Well-informed laymen may be more effective with their neighbors than school-initiated publicity.

The method of voting is prescribed in the Education Law and must be either by ballot, by taking and recording the ayes and noes, or by voting machines. In a union free or central school district the board of education may decide to designate hours during which the polls will be open. Use of this procedure presupposes that ample information has been provided so that the votes may be cast intelligently.

Under certain conditions a bond issue must be carried by a two-thirds vote and must have approval of the Board of Regents (Local Finance Law, section 104.00). In certain school districts which have territory within a city, bond issues must be carried by a 60 percent vote and have the approval of the Board of Regents and of the State Comptroller (New York State Constitution, article VIII, section 4; Local Finance Law, section 104.00). Application forms for securing approval of the Regents can be secured from the office of the State Education Department Counsel. All exhibits pertaining to the application should be submitted to the Counsel 3 weeks before the meeting of the Regents.

Final Plans

After a favorable vote the architect can be authorized to prepare complete plans and specifications which, after approval of the local school authorities and the Commissioner of Education, will serve as a basis of securing bids for the construction of the building.

In the process of developing the building plans and securing the approvals, numerous conferences will be held. Suggestions from the superintendent of buildings and grounds should be sought. In order that such suggestions and agreements not be lost and to avoid future misunderstanding, it is recommended that all such information be recorded. There should be understanding of needs for electric outlets, telephone service, audiovisual aids, etc. A suggestion regarding facilities needed by a teacher of a special subject may be lost among the many details if it is not put in writing. Conferences between the board and architect and conferences with other consulting authorities should be summarized and copies provided for participants to assure common understanding as to agreements reached.

Competitive Bidding and Awards

It has been evident for some time that there might be more standardization in the writing of specifications which would permit competitive bidding and at the same time allow the owner and the owner's representatives to have a freedom of choice of certain materials and equipment items. In order to stay within the limits provided by law, frequently it has been felt necessary to use an "or equal" clause throughout the specifications instead of utilizing a single "equivalency clause".

The following has been prepared through the joint efforts of the School Committee of the AIA, a group of representatives doing school work, the Division of Law and the Division of Educational Facilities Planning of the State Education Department. This material is offered as an aid for the writing of specifications.

Equivalents

A. Architects and engineers, as professional advisors and agents of the owner (the school district), should select the materials and methods of construction and engineering systems and devices best suited to the owner's purpose and program. It is believed that the

bidding procedure should not deprive the client of his prerogative of having the choice of certain materials and items of equipment. Since many items of mechanical equipment must operate for years after the completion of the contract, there are certain intangibles which cannot be specified but are of utmost importance; for example, reliability of service.

B. Essentially, the closed base bid specification wherein one and only one item is specified is a specification that is not acceptable for public work; i.e., public school construction. A wholly open bid specification is probably too loose and too indefinite, since it is a performance type specification being used to indicate the standard of quality desired but does not necessarily result in the lowest price to the owner. In the bidders-choice bid specification with three or more brand names specified, the requirements for competitive bidding are not met. The base bid type of specification has been most commonly used in the specifications offered by architects and engineers on public school construction for approval by the Commissioner of Education.

   Whenever base bid specifications are submitted, the words "or equal" necessarily must follow the words base bid. Whenever a brand name or manufacturer is named in the base bid specification, it indicates the standard of quality desired. Contractors may submit bids on the stated base bid, that is, on the standard of quality of the materials, products, or equipment desired, or contractors may submit an equivalent bid for "or equal" items. The equivalency of such items is to be judged by the architect or engineer whenever offered by bidders as equivalent to the base bid items and so reported to the Board of Education for its ultimate decision.

C. If instead of a base bid specification with the repetition of the words "or equal" throughout it is determined to provide an equivalency clause, the following is one form which might be used:

   EQUIVALENTS: Where, in these specifications, one certain kind, type, brand, or manufacture of material is named, it shall be regarded as the required standard of quality. Where two or more are named these are presumed to be equal, and the contractor may select one of those items. If the contractor desires to use any other kind, type, brand, or manufacture of material than those named in the specifications, he shall indicate on a substitution sheet what material, equipment, or method is offered as equal and, when requested, submit information de-

scribing wherein it differs from base specifications in specific detail and other information as required by the owner.

Award of Contracts

If alternates are included in the bidding and accepted, the award is to be made to the lowest responsible bidder on the basis of his base bid and accepted alternates. The award of contract shall be made to the lowest responsible bidder under the base bid items specified or to the lowest responsible bidder under the equivalent bid items specified, whichever is the lowest. The acceptable standard of quality of all equivalent items shall be determined by the architect, with the burden of proof of the equivalency of such items a responsibility of the bidders.

The owner or his representatives shall investigate the lowest bidder in order to determine his responsibility.

Bids for Construction

The architect and the legal counsel will advise the board as to advertising for bids and the receiving and opening of bids for construction; this should be in accordance with the law and good practice. Advertising is required for contracts for public work in excess of $2,500 and for purchases involving expenditures in excess of $1,000. Bids should be opened publicly and at the time specified in the advertising, not less than 5 days after the first publication of such advertisement; the date for bid opening must be specified in the advertisement (General Municipal Law, section 103; Education Law, section 1619). On a building project, the cost of which exceeds $50,000, provision must be made for independent bidding on each of the four major contracts, namely, plumbing and gasfitting, heating and ventilating, electrical wiring and illuminating fixtures, and general construction (General Municipal Law, section 101).

If time is of the essence, or if the board wishes to consider time as a factor in awarding contracts, a definite statement to that effect must be included in the notice to bidders. Alternate bids for alternate time schedules could also be requested.

Construction Contracts

Following are certain statutory requirements relating to construction contracts.

The services of a professional engineer (or registered architect) must be used on any public works project costing more than $5,000 (Education Law, section 7203).

The seal of a registered architect or licensed professional engineer is required on plans for construction of buildings or structures costing more than $10,000, as well as on any alterations to any building or structure where such alteration will cost more than $10,000 and involve changes affecting the structural safety of such building or structure. Farm buildings are excluded from these requirements, as are also residential buildings of 1,500 square feet or less, not including garages, carports, porches, cellars, uninhabitable basements, or uninhabitable attics (Education Law, section 7302 and section 7307).

Contracts shall contain provision prohibiting discrimination on account of race or color in employment of workers (Labor Law, section 220-*e*).

Contracts shall provide for the payment of the "prevailing rate of wages" as determined by the Industrial Commissioner for the community in which the work is being done (Labor Law, section 220).

Contracts shall provide for workmen's compensation insurance (General Municipal Law, section 108).

Awards of contracts may or may not be made at the time of opening of bids, depending upon whether more time must be allowed for study of the bids and of the responsibility and reliability of the lower bidders. Certain questions need to be answered. Has the bidder done similar work before? Were his relations with the architect, the clerk of the works, the materialmen, and the school authorities satisfactory? Did he provide good and adequate supervision? Did he, and does he now, have the organization, equipment, and financial standing necessary to complete the contract, and complete it on time?

The contracts for construction should be clear as to work to be performed, guarantees to be provided, bonds to be required, and payment schedule. Payments to contractors should be made promptly but only upon architect's certification.

Penalty clauses in contracts are not recommended unless the circumstances are quite unusual. Proving damage or loss due to delay in completion of contract is difficult. Most delays, very probably, could be shown to be from causes beyond the control of the contractor. On large projects where time of completion is important, school boards might find it worthwhile to invest in one or another of the program scheduling services, such as the Critical Path Method (CPM).

If the integrity and ability of the contractor have been determined at the time of awarding contracts, there should be no unnecessary delay, because delays penalize the contractor with additional overhead.

Clerk of the Works

A clerk of the works is essential for major projects. The architect should select the clerk of the works or at least pass upon the selection proposed by the board of education. It is not sufficient that the clerk of the works has been a local contractor with limited experience. He should have had architectural or engineering training, or experience as a contractor on large buildings. He acts for the architect in the latter's absence and must be competent to interpret the plans and specifications and to pass upon the work done. He must be literate, while at the same time practical, possessing architectural and mechanical abilities as well as abilities in the human relations sphere. He should have a reputation for fairness, impartiality, and reasonableness.

To properly represent the architect and the board, his authority should be spelled out in the construction contracts so that all parties may know just what are his responsibilities and his limitations. He has only the authority delegated to him.

The clerk of the works represents both the architect and the board of education. He is paid by the board although his instructions come primarily from the architect. He reports to the architect who would, when the occasion required, consult with the board of education.

On particularly complicated mechanical work, a subclerk of works who is an expert on mechanical installations should be employed either full or part time.

Insurance During Construction

The board of education or trustees have obligations for the protection of property and persons while construction is going on just as they have for completed and operating schools.

It is necessary to carry fire insurance during construction to protect the interests of the district. It is also important to carry public liability insurance. A building under construction is very attractive to both children and adults, and there is some liability on the part of the district in case of injury. Both types of protection are for the district's interests and are in addition to the insurance carried by the various contractors. The cost of such insurance is a part of the overall costs and should be included in the building budget. Contractors should be required to file certificates of the insurance they carry with the board.

Supervision of Construction

Several persons connected with a building project will do some supervising or inspecting during the period of construction. It is important that their relationships, responsibilities, and obligations be understood.

The architect has the primary responsibility and is employed by the board of education to do the supervising. Ordinarily, the architect does not give continuous supervision and he may delegate some duties to the clerk of the works. The clerk of the works will serve as eyes for the architect and board and will make decisions only in cases of emergency or upon the direction of the architect.

The superintendent and board members are vitally interested observers of the building operations, but they should not attempt to give any instructions except through the architect. There may be occasions of emergency when it will be necessary to delay, at least, some operation pending consultation with the architect, but such orders should be issued by the clerk of the works.

Addenda and Change Orders

Even with the best of planning, modifications in the completed plans and specifications are sometimes necessary. These modifications are handled either by addenda or change orders.

Addenda are issued before bids are submitted. They may be required because of a lack of understanding of the specifications on the part of prospective bidders or because of changes suggested by the board of education, the architect, or the Division of Educational Facilities Planning. Copies shall be submitted to the Division of Educational Facilities Planning for approval.

Change orders are issued after award of contract and usually during construction. Changed conditions, new requirements, or discovered errors in plans may result in some changes during construction. All such changes, even though minor and without cost, should be by officially approved change orders. These change orders are prepared by the architect and approved by the board of education, after which they are submitted to the Division of Educational Facilities Planning for approval. Work resulting from a change order should not be carried through without approval of the Division.

All addenda and change orders become parts of the official plans

and specifications and should be filed with the approved plans. These changes may be very important in any future alterations of or additions to the building. It is important that all officially approved plans and specifications be preserved by the local school district for the life of the building.

It is recommended that the school board purchase a set of building construction drawings conforming to actual approved construction and reproduced on linen cloth for record purposes. These drawings will show details of any major changes made during the period of construction. The architect is entitled to an additional fee for drawings of this kind, so some adjustment of his fee will be in order.

Final Acceptance

After all construction has been completed and the architect has made his final and detailed inspection, he will issue his certificate of final approval. Prior to the issuance of this certificate, the board of education should make an overall inspection in the company of the architect. The board members should cover the building completely in order to see at first hand what has been provided and to assure themselves that the building is complete. When there are parts of the work unfinished or in need of correction, a percentage of the balance of contract amount is retained until the faults are remedied. This percentage varies according to the amount of the contract; to retain 10 percent of a $2,000,000 contract would be too much if 1 percent retained would provide adequate guarantees. If the proper bonds and guarantees have been provided and the work appears to be satisfactorily completed, it will not be necessary to retain any part of the payments to contractors. The architect and the board shall execute the form "Certificate of Completion and Acceptance of Building" and submit it to the Division of Educational Facilities Planning (see Appendix II).

Placing the Building in Use

Education is the largest and most important enterprise in most communities. The school plant means more to more people than any other building. It also represents a major financial outlay which is made jointly by all local taxpayers. Because of these facts and the interest all residents have in the education of the children, it is natural that they should wish to see what has been provided.

Arrangements should be made for public inspection of any new school building as soon after its completion as possible. Plans should

be developed carefully with appropriate guides and speakers who can show and explain the various features of the building. This open house or inspection may be in connection with formal dedication ceremonies.

Additional time should be given to instructing the school staff in regard to the best use of the new building. Custodians should be made thoroughly familiar with all mechanical devices and their operation. If possible, the head custodian should be freed of other duties to spend considerable time in the building, particularly during the installation of heating, plumbing, electrical, and other operational features of the building. This will permit him not only to learn the mechanics of efficient operation but also to learn the location of the various pipes and lines.

Every school mechanical system is, in a sense, unique in its characteristics and its problems, with some of the problems difficult to anticipate. Depending on the size of the project, a period of a few days to many months must be expected to pass before adjustments are completed and custodians are fully trained. In every case, manuals covering the care and operation of the mechanical equipment should be issued to the school custodians, along with whatever instructions and training are necessary.

Teachers and principals should be instructed as to the important features of the building and the results to be expected in the way of comfort, safety, and educational aids. The building has been planned for many years of use, and the best knowledge of architects, engineers, and educators has been incorporated in the plans. Best results will be obtained by the teacher who is well informed.

References

American Association of School Administrators. American School Buildings. 27th yearbook. 1949. The Association. 1201 16th St., NW. Washington, D.C. 20004

The American School and University. Buttenheim Publishing Corp. 757 Third Ave., New York, New York 10017

National Council on Schoolhouse Construction. Guide for Planning School Plants. The Council. Secretary, 409 Education Building, Michigan State University, East Lansing, Michigan 48823

Periodicals

The American School Board Journal. Bruce Publishing Co., 400 N. Broadway, Milwaukee, Wisconsin 53201

The Nation's School. 1050 Merchandise Mart, Chicago, Illinois 60654

School Management. 22 W. Putnam Ave., Greenwich, Connecticut 06830

APPENDIX I

Pages 27 to 36, inclusive, show sample forms used effectively by one of the school districts.

CERTIFICATE OF INSURANCE (in Duplicate) to:

RAMAPO CENTRAL SCHOOL DISTRICT #2
Administration Offices
471 Viola Rd., Spring Valley, N.Y.

Name and Address of Contractor:

.....

.....

Contract .....

The Subscribing Insurance Company certifies that Policies of Insurance as described below have been issued to the Contractor and are in force at this time. The insurance provided complies with the requirements in the Specifications of the Contract for .....

at the location .....

KINDS AND TYPES OF INSURANCE:

Form	Limits of Liability	Policy Number	Policy Period
1. Workmen's Compensation and Employers' Liability	As provided by Law in the State of: New York		
2. Contractors' Liability, including: A. Contractors' Protective Liability Insurance (Contingent Liability) B. Completed Operations Coverage C. Contractual Liability on Clause quoted below*			
Bodily Injury Liability:	$300,000 per person $1,000,000 per occurrence		
Property Damage Liability:	$100,000 per occurrence $200,000 aggregate		

*"The Contractor hereby assumes the entire responsibility and liability for any and all injury to or death of any and all persons, including the Contractor's agents, servants and employees, and for any and all damages to property caused by or arising from or resulting from any act or omission in connection with this contract, or the prosecution of the work hereunder, and the Contractor shall indemnify and save harmless the Owner from and against any and all loss, cost, damages and/or expense arising therefrom."

"XCU EXCLUSIONS". If the Contractor's operations involve discharge of explosives, the use of mechanical equipment for excavating or drilling in streets or highways, or excavation near an existing structure, building demolition, pile driving, or shoring, underpinning or raising any building, the Contractor's Liability Policy must be written to afford coverage by deletion of the 'xcu exclusions' ":

.... "x" Exclusion Deleted
.... "c" Exclusion Deleted
.... "u" Exclusion Deleted
(Check appropriate box or boxes)

If such Policies are cancelled, changed, or not renewed beyond the expiration stated, the Subscribing Company agrees to provide ten (10) days prior written notice to Ramapo Central School District #2.

NAME AND ADDRESS OF CARRIER:

.....

By: .....
Authorized Representative

Date .....

PAYMENT BOND

CONTRACT: .....

PROJECT: .....

for: RAMAPO CENTRAL SCHOOL DISTRICT No. 2, Spring Valley, N.Y.

KNOW ALL MEN BY THESE PRESENTS, That we, ...

.....

.....

.....

hereafter referred to as the "Principal", and .....

.....

.....

.....

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to the CENTRAL SCHOOL DISTRICT #2 OF THE TOWNS OF RAMAPO, CLARKSTOWN, ORANGETOWN AND HAVERSTRAW, hereinafter referred to as the "District", or to its successors and assigns, in the penal sum of

.....

.....

.....

($.....) Dollars, lawful money of the United States for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the District .....

for .....

.....

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full:

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns and other Subcontractors to whom Work under this Contract is sublet and his or their sucessors and assigns shall promptly pay or cause to be paid all lawful claims for

(a) Wages and compensation for labor performed and services rendered by all persons engaged in the prosecution of the Work under said Contract, and

any amendment or extension thereof or addition thereto, whether such persons be agents, servants or employees of the Principal or of any such Subcontractor, including all persons so engaged who perform the work of laborers or mechanics at or in, the vicinity of the site of the Project regardless of any contractual relationship between the Principal or such Subcontractors, or his or their successors or assigns, on the one hand and such laborers or mechanics on the other, but not including office employees not regularly stationed at the site of the Project; and

(b) Materials and supplies (whether incorporated in the permanent structure or not), as well as teams, fuels, oils, implements or machinery furnished, used or consumed by said Principal or any subcontractor at or in the vicinity of the site of the Project in the prosecution of the Work under said Contract and any amendment or extension thereof or addition thereto; then this obligation shall be void; otherwise to remain in full force and effect.

This bond is subject to the following additional conditions, limitations and agreements:

(a) The Principal and Surety (Sureties) agree that this bond shall be for the benefit of any materialman, laborer, or subcontractors having a just claim as well as the District itself.

(b) All persons who have performed labor, rendered services or furnished materials and supplies, as aforesaid, shall have a direct right of action against the Principal and his, its or their successors and assigns, and the Surety (Sureties) herein, or against either or both or any of them and their successors and assigns. Such persons may sue in their own name, and may prosecute the suit to judgment and execution without the necessity of joining with any other person as party plaintiff.

(c) The Principal and Surety (Sureties) agree that neither of them will hold the District liable for any judgment for costs or otherwise, obtained by either or both of them against a laborer, materialman, or subcontractors in a suit brought by either a laborer, materialman or subcontractor under this bond for moneys allegedly due for performing work or furnishing material.

(d) The Surety (Sureties) or its successors and assigns shall not be liable for any compensation recoverable by an employee or laborer under the Workmen's Compensation Law.

(e) In no event shall the Surety (Sureties), or its successors or assigns be liable for a greater sum than the penalty of this bond or be subject to any suit, action or proceeding hereon that is instituted by any persons, firm, or corporation hereunder later than two years after the complete performance of said Contract and final settlement thereof.

The Principal, for himself and his successors and assigns, and the Surety (Sureties), for itself and its successors and assigns, do hereby expressly waive any objection that might be interposed as to the right of the District to require a bond containing the foregoing provisions, and they do hereby further expressly waive any defense which they or either of them might interpose to an action brought hereon by any person, firm, or corporation, including subcontractors, materialmen and third persons, for work, labor, services, supplies or material performed, rendered, or furnished as aforesaid upon the ground

that there is no law authorizing the District to require the foregoing provisions to be placed in this bond.

And the Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties), and its bonds shall be in no way impaired or affected by any extension of time, modification, omission, addition, or change in or of the said Contract or the work to be performed thereunder, or by a payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any part thereof, or of any Work to be performed, or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all such extensions; modifications, omissions, additions, changes, payments, waivers, assignments, subcontracts and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, Subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal.

IN WITNESS WHEREOF, the Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seal to be hereunto affixed and these presents to be signed by their proper officers, this .....day of ....., 19.....

(SEAL)

.....
Principal

By: .....

(SEAL)

.....
Surety

By .....

(SEAL)

.....
Surety

By .....

(SEAL)

.....
Surety

By .....

(SEAL)

.....
Surety

By .....

(SEAL)

.....
Surety

By .....

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of .....)
SS.
County of .....)

On this ..... day of ....., 19.....

before me personally came .....

to me known, who, being by me duly sworn did depose and say that he resides at .....;

that he is the ..... of .....

.....

the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

.....

ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP

State of .....)
SS.
County of .....)

On this ..... day of ....., 19.....

before me personally appeared .....

to me known and known to me to be one of the members of the firm of

.....

described in and who executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and deed of said firm.

.....

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of .....)
SS.
County of .....)

On this ..... day of ....., 19.....

before me personally appeared .....

to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same.

.....

Affix Acknowledgements and Justification of Sureties.

PERFORMANCE BOND—1

CONTRACT: .....

PROJECT: .....

for: RAMAPO CENTRAL SCHOOL DISTRICT #2, Spring Valley, N.Y.

KNOW ALL MEN BY THESE PRESENTS, That we, ...

.....

.....

.....

hereafter referred to as the "Principal", and .....

.....

.....

.....

hereinafter referred to as the "Surety" ("Sureties") are held and firmly bound to the CENTRAL SCHOOL DISTRICT #2 OF THE TOWNS OF RAMAPO, CLARKSTOWN, ORANGETOWN, AND HAVERSTRAW, hereinafter referred to as the "District" or to its successors and assigns, in the penal sum of .....

.....

.....

($.....) Dollars, lawful money of the United States, for the payment of which said sum of money well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal is about to enter, or has entered, into a Contract in writing with the District .....

for .....

.....

.....

.....

a copy of which Contract is annexed to and hereby made a part of this bond as though herein set forth in full;

NOW, THEREFORE, the conditions of this obligation are such that if the Principal, his or its representatives or assigns, shall well and faithfully perform the said Contract and all modifications, amendments, additions and alterations thereto that may hereafter be made, according to its terms and its true intent and meaning, and shall fully indemnify and save harmless the District from all cost and damage which it may suffer by reason of failure so to do, and shall fully reimburse and repay the District for all outlay and expense which the District may incur in making good any such default, then this obligation shall be void, otherwise the same to remain in full force and effect.

The Surety (Sureties), for value received, hereby stipulates and agrees, if requested to do so by the District, to fully perform and complete the Work to be performed under the Contract, pursuant to the terms, conditions, and covenants thereof, if for any cause, the Principal fails or neglects to so fully perform and complete such Work. The Surety (Sureties) further agrees to commence such Work of completion within twenty (20) days after written notice thereof from the District and to complete such Work within such time as the District may fix.

The Surety (Sureties), for value received, for itself and its successors and assigns, hereby stipulates and agrees that the obligation of said Surety (Sureties) and its bond shall be in no way impaired or affected by an extension of time, modification, omission, addition, or change in or to the said Contract or the Work to be performed thereunder, or by any payment thereunder before the time required therein, or by any waiver of any provisions thereof, or by any assignment, subletting or other transfer thereof or of any Work to be performed or any moneys due or to become due thereunder; and said Surety (Sureties) does hereby waive notice of any and all such extensions, modifications, omissions, additions, changes, payments, waivers, assignments, subcontractors and transfers, and hereby expressly stipulates and agrees that any and all things done and omitted to be done by and in relation to assignees, subcontractors, and other transferees shall have the same effect as to said Surety (Sureties) as though done or omitted to be done by or in relation to said Principal.

IN WITNESS WHEREOF, The Principal and the Surety (Sureties) have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereunto affixed and those presents to be signed by their proper officers, this .....day of ....., 19.....

(SEAL) ..... (L.S.)
Principal

By .....

(SEAL) .....
Surety

By .....

(SEAL) .....
Surety

By .....

(SEAL) .....
Surety

By .....

(SEAL) .....
Surety

By .....

Bond Premium Rate .....

Bond Premium Cost .....

ACKNOWLEDGEMENT OF PRINCIPAL, IF A CORPORATION

State of .....)
SS:
County of .....)

On this ..... day of ....., 19.... before me personally came .....
to me known, who, being by me duly sworn did depose and say that he resides at .....;
that he is the ..... of .....
.....
the corporation described in and which executed the foregoing instrument; that he knows the seal of said corporation; that one of the seals affixed to said instrument is such seal; that it was so affixed by order of the directors of said corporation, and that he signed his name thereto by like order.

.....

ACKNOWLEDGEMENT OF PRINCIPAL, IF A PARTNERSHIP

State of .....)
SS:
County of .....)

On this ..... day of ....., 19.... before me personally appeared .....
to me known and known to me to be one of the members of the firm of
.....
described in and who executed the foregoing instrument and he acknowledged to me that he executed the same as and for the act and deed of said firm.

.....

ACKNOWLEDGEMENT OF PRINCIPAL, IF AN INDIVIDUAL

State of .....)
SS:
County of .....)

On this ..... day of ....., 19.... before me personally appeared .....
to me known and known to me to be the person described in and who executed the foregoing instrument and acknowledged that he executed the same.

.....

Affix Acknowledgements and Justification of Sureties.

ARCHITECT'S REPORT ON JOB MEETINGS

Construction Projects

Projects:..... ***Date***.....

Participants:..... .....

....

....

Review of Previously Reported Problems:

Current Status and Problems:

Recommendations:

Architect's Evaluation of Job Progress:

Contractor	Progress since last Job Meeting		Status in Relation to Progress Schedule (Give approx. time variance)			Comments
	Satis.	Unsatis.	On	Ahead	Behind	
G.C.	.....	.....	.....	.....	.....	.....
H. & V.	.....	.....	.....	.....	.....	.....
Plumb.	.....	.....	.....	.....	.....	.....
Elect.	.....	.....	.....	.....	.....	.....
Job as a Whole						

.....

Architect's Representative

APPENDIX II

Form EFP-CCA

041
(1-3)

THE UNIVERSITY OF THE STATE OF NEW YORK
THE STATE EDUCATION DEPARTMENT
DIVISION OF EDUCATIONAL FACILITIES PLANNING
ALBANY, NEW YORK 12224

EDUCATION DEPARTMENT USE

Code (4-14)

CERTIFICATE OF COMPLETION AND ACCEPTANCE OF BUILDING*

(SUBMIT TWO COPIES OF THIS FORM TO THE DIVISION OF EDUCATIONAL FACILITIES PLANNING)

PROJECT (Circle appropriate letters.)

1. (19-1) a. remodeling
(-2) b. addition
(-4) c. alteration
(-8) d. _____

2. Grades:
(20-1) a. K-6
(-2) b. 7-9
(-4) c. 10-12
(21-1) d. 7-12
(-2) e. K-3
(-4) f. _____

3. (22-1) a. administration bldg.
(-2) b. bus garage
(-4) c. library
(-8) d. _____

on behalf of the
4.a. board of education b. board of trustees c. sole trustee,
the regularly constituted authority of
5.a. central b. city c. village d. common e. union free f. _____ school district

No. _____ town(s) of _____

county of _____, State of New York.

Popular name of district _____ Building name _____

CERTIFICATE OF ARCHITECT OR PROFESSIONAL ENGINEER

I (We) _____ architect(s) or

professional engineer(s) for the _____
(Project)

certify on this _____ day of _____ 19____ that to the best of our knowledge and belief

this project has been completed in accordance with the plans and specifications approved on _____
(Date)

by the Commissioner of Education and with approved change orders as follows:

I (We) further certify that the mechanical equipment of the building appears in good operating condition and that the designated representatives of the board of education have been instructed in the operation of the mechanical systems and have been provided with equipment manuals as required by the Regulations of the Commissioner of Education.

_____ By _____
(Date) (Architect or Professional Engineer)

(over)

ACCEPTANCE BY BOARD OF EDUCATION

Acting upon the Certificate of the Architect(s) or Professional Engineer(s)

_____ the Board of Education of

_____ (District), by formal resolution accepted the

_____ (Project) on _____ (Date)

as having been completed in accordance with plans and specifications approved by the Commissioner of Education and with approved change orders.

_____ (Date) _____ (President of the Board of Education)

ACKNOWLEDGEMENT BY STATE EDUCATION DEPARTMENT

Receipt of the Certificate of Completion dated _____ and

Acceptance of Building dated _____ for _____ (Project)

_____ (Location) and _____ (District)

is hereby acknowledged.

_____ Date By: _____

---

* The amount of money retained by the owner to insure completion by the contractor (or contractors) of all the unfinished items on the architect's final check list should be both sufficient and reasonable. A copy of this form, acknowledged by the Division of Educational Facilities Planning, should be in the Board of Education's possession before it releases the final payment to the last prime contractor.

March 1965

APPENDIX III

Excerpts From Laws Relating to Building Projects

EDUCATION LAW

"1. No schoolhouse shall hereafter be erected, repaired, enlarged or remodeled in any school district except in a city school district in a city having seventy thousand inhabitants or more, at an expense which shall exceed one hundred thousand dollars, until the plans and specifications thereof shall have been submitted to the commissioner of education and his approval endorsed thereon. Such plans and specifications shall show in detail the ventilation, heating and lighting of such buildings...." *Education Law, section 408, subdivision 1.*

"2. . . . no official of this state . . . shall accept or approve any plans or specifications that are not stamped (a) with the seal bearing the authorized facsimile of the signature of a licensed architect or a licensed professional engineer duly licensed in this state...." *Education Law, section 7302, subdivision 2.*

There are certain exceptions to the foregoing as follows:

1. Farm buildings
2. Residence buildings of less than 1,500 square feet
3. Alterations not affecting structural or public safety and costing $10,000 or less. *Education Law, section 7307.*

LOCAL FINANCE LAW

"11. *Buildings.* The acquisition or construction of buildings not included in any other subdivision hereof, whether or not including grading or improvement of the site, original furnishings, equipment, machinery or apparatus required for the purposes for which such buildings are to be used, as follows:

(a) Class "A" (fireproof and certain fire-resistant) buildings.

(1) Buildings, the walls of which are constructed of brick, stone, concrete, metal or other incombustible material, and in which there are no wooden beams or lintels, and in which the floors, roofs, stair halls and other means of vertical communication between floors and their enclosures are built entirely of brick, stone, metal or other incombustible materials, and in which no woodwork or other inflammable material is used in any of the rough partitions, floor or ceiling structures, or

(2) Buildings, not more than one story above the ground, the outer walls of which are constructed of brick, stone, metal, stucco or other fire-resisting material and which are to be used as schoolhouses by school districts wholly outside of a city, thirty years.

(b) Class "B" (fire-resistant) buildings. Buildings, the outer walls of which are constructed of brick, stone, concrete, metal, stucco or other fire-resisting material, twenty years.

(c) Class "C" buildings. Buildings which are neither class "A" nor class "B" as defined in items (a) and (b) above, including any such building which is rebuilt or altered so that it, together with any addition or vertical or other extension is not fireproof or fire-resisting, as thus defined, fifteen years.

"12. Additions to or conversion of buildings:

(a) (1) The construction of an addition or alterations to or the reconstruction of a class "A" building or the conversion of a class "B" or class "C" building into a class "A" building, twenty years.

(2) The construction of an addition or additions to or the reconstruction of a class "B" building or the conversion of a class "C" building into a class "B" building, fifteen years.

(3) The construction of an addition or additions to or the reconstruction of a class "C" building, ten years.

(b) The periods of probable usefulness set forth in item (a) above shall include original furnishings, equipment, machinery or apparatus required for the purposes for which such additions to such buildings or for which reconstructed or converted buildings are to be used.

(c) A building which is to be attached to an existing building or buildings shall be deemed to be a new building and not an addition if the probable useful life thereof is not dependent upon the useful life of such existing building or buildings.

(d) The terms "class 'A' building" and "class 'C' building", as used in this subdivision, shall mean such buildings as they are described in subdivision eleven of this paragraph.

"13. Certain building alterations. The installation or reconstruction of a heating, lighting, plumbing, ventilating, elevator or power plant or system in a building when not in connection with the original construction or the reconstruction of such building, in a class "A" or "B" building, ten years; in a class "C" building, five years. The terms "class 'A' building", "class 'B' building", and "class 'C' building", as used in this subdivision shall mean such buildings as they are described in subdivision eleven of this paragraph." *Local Finance Law, section 11.00, subdivisions 11, 12, and 13.*

Deposit and use of proceeds from sale of bonds, bond anticipation notes, capital notes, urban renewal notes or budget notes

"a. The proceeds, inclusive of premiums, from the sale of bonds. . . . shall be deposited in a special account in a bank or trust company. . . . shall not be commingled with other funds of the issuer, and shall be expended only for the object or purpose for which such obligations were issued. In the event that any portion of the proceeds . . . . is not expended for the object or purpose for which such obligations were issued, such portion shall be applied only to the payment of the principal of and interest on such obligations, respectively. . . . ." *Local Finance Law, section 165.00, subdivision a.*

LEGAL PROVISION FOR PAYMENT FOR PRELIMINARY PLANS

"It has been our view over the years that boards of education, in order to submit propositions for building purposes to the voters of the district had to base the figures used in such propositions on preliminary plans and estimates for the purpose of enabling the voters to intelligently decide the questions involved . . . It is our view that the board of education has legally the right to expend all sums reasonably necessary for such purpose without a vote of a special meeting.

"As to the question of financing such expenditure, the provisions of the Local Finance Law apply. Where the amount was not included in the budget . . . the only method of financing would be by issuing budget notes." *From letter by Charles A. Brind, Jr., Counsel for State Education Department.*

SAMPLE NOTICES AND ADVERTISEMENTS

To designate and purchase site

NOTICE OF SPECIAL DISTRICT MEETING

The undersigned (*trustee, board of trustees, or board of education*) of .....school district no. ..... town of ..... county of ....., hereby gives notice that a special meeting of said district will be held at the schoolhouse of said district on the ..... day of ..... 19 .... at ..... o'clock p.m. Eastern Standard (or Daylight) Time for the purpose of voting upon the following question:

2. Shall the district designate as a.....the following
[New site, or addition to present site]
described piece or parcel of land, to wit: .....
[Give accurate description of
.....
lands to be acquired by metes and bounds.]
.....
and authorize the trustee(s) to spend for the acquisition of such site, by purchase or condemnation, an amount not to exceed $....., and to issue therefor obligations of the district pursuant to the provisions of the Education Law and the Local Finance Law, and to levy a tax to be collected in installments for the payment of the principal of and the interest on such obligations.

Dated .....19.....

.....
[*Signed by sole trustee, members of board of trustees, or board of education*]

.....
Clerk

NOTE. The designation of a school site may not be made at an annual meeting, but where the designation has been made, or will be made, by the board of education under section 408, subdivision 2, or at a separate meeting, the purchase of the site may be authorized at the annual meeting, provided the notice of the meeting contains a statement to that effect.

To authorize funds for erection of building

NOTICE OF SPECIAL DISTRICT MEETING

The undersigned *(trustee, board of trustees, or board of education)* of ..... school district no. ..... town of ..... county of ....., hereby gives notice that a special meeting of said district will be held at ..... on the ..... day of ..... 19.... at .....o'clock p.m. Eastern Standard (or Daylight) Time for the purpose of voting upon the following resolution:

Resolved, That the district authorize the erection of a new school building at a cost not exceeding the sum of.....dollars ($.....) and authorize the *(trustees, board of trustees, or board of education)* to issue therefor obligations of the district pursuant to the provisions of the Education Law and the Local Finance Law, and to levy a tax to be collected in installments for the payment of the principal of and the interest on such obligations.

Dated .....19....

.....
[Signed by sole trustee, members of board of trustees, or board of education]

.....
Clerk

Sample advertisement for bids for construction

NOTICE TO CONTRACTORS

Separate sealed proposals for the:

General Construction
Heating and Ventilating
Plumbing
Electrical

work for the Maple Hill School on Laurel Avenue, Grandville, Albany County, New York, will be received by the Board of Education, Union Free School District No. 6 of the Town of Easton, Albany County, New York, in the Board Room of Easton High School on Easton Avenue, Easton, New York, on July 5, 1965, until 8:00 o'clock p.m. (Eastern Daylight Time) at which time they will be publicly opened and read aloud.

The Information for Bidders, Form of Bid, Form of Contract including General Conditions, Plans and Specifications, Forms of Performance and other Surety Bonds may be examined at the office of James Davis, Architect, 123 Main Street, Weston, New York, and copies thereof may be obtained upon deposit of $50.00 for the General Construction Set, and $25.00 for each of the Mechanical Trades sets. Such deposit will be refunded to any bidder duly submitting a proposal with the required bid security upon the return of such copy in good condition within twenty (20) days after the opening of bids. One-half of such deposit will be refunded to each nonbidder upon return of copies in good condition.

The Board of Education, above named, reserves the right to waive any informalities in or to reject any or all bids.

Each bidder must deposit with his bid, security in an amount not less than five per centum (5%) of the base bid in the form and subject to the conditions provided in the Information for Bidders.

Attention of bidders is particularly called to the requirements as to conditions of employment to be observed and minimum wage rates to be paid under the contract.

No bidder may withdraw his bid within 45 days after the date set for the opening thereof.

Dated: June 10, 1965

Board of Education, U.F.S.D. No. 6
Town of Easton, Albany Co., N.Y.
By John J. Doe

.....
President

.....
Clerk

Note. Separate bids for the four major contracts are required where cost of projects exceeds $50,000 (General Municipal Law, section 101).

APPENDIX IV

APPENDIX IV a

THE ADVANCEMENT OF PLANS FOR MAJOR PROJECTS THROUGH THE DIVISION OF EDUCATIONAL FACILITIES PLANNING

The procedure outlined in this leaflet for the advancement of plans through the Division of Educational Facilities Planning is designed to achieve the following objectives:

1. That a careful and objective study of the school plant needs of the district be made, including selection of site.
2. That the building plans to meet these needs will contain suitable and adequate accommodations.
3. That the Board of Education will be informed as to the character and quality of the proposed building before it commits itself to the advancement of the project beyond preliminary plans.
4. That all elements entering into the cost of the project will be carefully studied and brought to the attention of the Board of Education before the people of the district are asked to appropriate funds for the project. This will include studies to select the proper materials which affect the cost of insurance and the cost of maintaining the structure during its lifetime.
5. That the final plans and specifications will receive the Commissioner's final approval with a minimum of delay and change.

School districts may be asked to work out a long-term budget which should include not only the new debt service but also any additional current expenses that will accrue. This budget should be prepared under the guidance of our Division of Educational Management Services. An anticipated tax rate for a five-year period will be ascertained. Districts having building projects are encouraged to take advantage of this type of service which the Division of Educational Management Services gives. A financial study will be required for districts whose share of the bonded indebtedness exceeds 10% of true valuation, and for these districts the approval of the Board of Regents is necessary.

I. Study of School Plant Needs

After the Application for Examination and Approval of a School Site has been approved by the Division of Educational Facilities Planning, the local school officials and this Division should continue their cooperative study of the school plant needs, a study in which

the selected architect or engineer should also participate. Later, the architect or engineer should present preliminary plan studies to the Division and the Board of Education at a *joint meeting* before asking the Board to approve his preliminary design. Such a joint review will avoid Division criticisms and objections to plans which have already been approved by the Board of Education.

From these studies and reviews will result the recommended room schedule and building program.

If the new construction is an alteration or addition to an existing building, an evaluation form (EFP-E) reporting on the construction and condition of the existing building must be made out. This should be done during the early stages of the preliminary drawings and submitted with the architect's or engineer's contract with the Board of Education, at about the same time as the first submission of preliminary drawings.

Applications to the Board of Regents for approval of bond issues (10% cases) should be submitted to the Education Department *three weeks* before the meeting of the Board of Regents. These meetings are usually the last Thursday and Friday of the month.

II. Preliminary Drawings

Based on the recommended building program, the final preliminary drawings should be prepared by the architect or engineer and submitted in duplicate to the Division of Educational Facilities Planning for its examination, suggestions, and approval. Important points to keep in mind are:

A. On *plot plan sheet* or *first sheet showing floor plans* show a miniature key plan of each floor of the building indicating the square footage and a summary of square footage computations. In the case of additions, plans and computations must be separate for the existing structure and the addition or additions.

B. Show square footage of all teaching stations in each such space.

C. Each space must be carefully labeled for its intended use as this has a direct relationship to the allowable pupil capacity; for instance, if the cafeteria is planned to accommodate students in a study hall situation, it should be labeled "cafeteria-study hall." Such dual use of space does in fact increase the rated capacity of a school.

D. Key letters, symbols, or numerals referring to a table or list of spaces are not acceptable.

E. Scale of the drawings shall be not less than 1/16".

Revised or alternate submissions may be necessary before the final preliminary drawings are acceptable.

While the initial sketches may be drawn in single line and show only the main floor plans with a layout of rooms, the submission of preliminary drawings should also include:

1. A topographical map of the site showing:
   (a) Orientation
   (b) Existing and proposed contours at 1-foot intervals
   (c) Location of proposed new building (with possible extensions) and its relation to the present and future grade levels.
   (d) Water, gas, electrical and sewage facilities or service connections
   (e) General scheme of recreation facilities, primary landscaping features, walks, drives, parking areas
   (f) Adjacent properties, buildings, streets, highways, etc.
   (g) Location of test pits or borings
2. Plans of all floors, basement and roof. (For an addition, floor plans of the complete building with all spaces labeled as to activity and size shall be included. These may be at a small scale.)
3. Principal elevations and sections indicating the general character of the exterior and interior architectural design.
4. An outline specification. A form for the outline specification is part of the Application for Examination and Approval of Preliminary Plans (EFP-P).
5. A report on the findings from test pits or borings. This report should include cross sections of the pits or borings.
6. Reports of new construction materials and of new mechanical and electrical systems which are being contemplated or which are still in the experimental stage shall be submitted for study and for acceptance by this Division. Examples are: the flame spreads of, and smoke contributed by, new materials; the installation of electric heating and air conditioning systems; high temperature hot water systems; heat pumps; variations from regular methods of construction and systems.

When the preliminary drawings have reached an acceptable form the architect should then prepare his estimate of cost. This estimate shall relate not only to the cost of construction but also to all other items essential to the completion of the project, such as professional fees, equipment, site and site development, clerk of the works, etc.

This estimate is a part of the Application for Examination and Approval of Preliminary Plans (EFP-P).

Two executed copies of the Application for Examination and Approval of Preliminary Plans (EFP-P) shall be filed with the submission of complete preliminary drawings. (Copies of this form may be obtained from the Division of Educational Facilities Planning.)

For repair, replacements and minor alterations preliminary submissions are unnecessary. Only the final plans and specifications need to be submitted.

III. Unfinished Working Drawings

After preliminary drawings are approved and funds are available, the Board of Education may direct the architect or engineer to proceed with the working drawings for the project.

Working drawings should be examined by the Division of Educational Facilities Planning while still unfinished so that details can be studied. Since architects and engineers vary in their methods, the particular time for this review and examination may very well vary with different architects and engineers for them to obtain maximum benefit. In general, though, the following items should be in advanced stages:

1. Topographical map of site showing orientation of building, as well as walks, fences, driveways, parking areas, bus garage location, proposed new contours, and other features which are to be included within the principal construction contracts.
2. Basement, floor, and roof plans showing the classrooms, the corridors (including stairs), exits, windows, doors (showing door swings), chalkboards, display boards, cabinets, lockers, wardrobes, and instructional equipment. In the early development of final plans, floor plans and elevations at a scale of ¼″ = 1′-0″ should also be prepared and submitted for all classrooms both typical and special. These include science, homemaking, typing, office (or secretarial), music, art (or arts and crafts) rooms, industrial art and agricultural shops; also, administrative suites, health suites, auditoriums, and kitchen and locker rooms.
3. Elevations of all facades with pencil studies and detail drawings, and sections through the typical and important parts of the building to show the general character of the architectural design.
4. Mechanical drawings showing general design of all heating and ventilating, sanitary and electrical installations.

Any variation from the accepted preliminary drawings should be specifically mentioned in connection with this submission.

IV. Final Working Drawings and Specifications

Working drawings and specifications can now be completed and contract documents prepared. Working drawings and specifications should be submitted to the Division of Educational Facilities Planning in duplicate, *with one set* of drawings black on white, together with two copies of application (EFP-F) for the Commissioner's approval. Copies of this application may be obtained from the Division of Educational Facilities Planning.

It is important that the title of the project *be the same* on plans, specifications and application form, (EFP-F) so that the title on the Bond Certificate will be made out correctly. If the project is one of "Additions and Alterations" instead of an "Addition and Alteration" this should be clearly indicated in all titles so that the title on the Bond Certificate will be copied correctly and will provide the exact wording necessary to satisfy legal requirements.

In the submission of final plans these items should *also* be kept in mind:

A. Maximum size of prints shall not exceed 36" x 48".

B. Leave a bordered blank space not less than 5" high and 7" long on the plot plan sheet or the first sheet showing floor plans. This space will be for the use of this Division and should be directly above or to one side of the title block.

C. On plot plan sheet or first sheet showing floor plans include a miniature key plan of each floor of the building indicating the square footage of each teaching space and a summary of square footage computations. (In the case of school additions plans and computations must be separate for the existing structure and the addition or additions; the gross square footage of the existing structure must be indicated).

D. Show square footage of all teaching stations in each such space.

E. The labeling of spaces on the floor plans should correspond with the approved preliminary plans. If a change has been made this should be noted in a letter accompanying the application.

F. *Each specification cover sheet and each sheet of the drawings must bear the seal and signature of the architect or engineer.*

Ordinarily this Division will need three or four weeks for the processing of working drawings and specifications. We recommend a minimum of 30 days for this Division's review and another 30 days for the contractors to prepare bids.

These final submissions should contain copies of all drawings including plot plan, floor plans, elevations, sections, and details; also, all mechanical and electrical work with the utility services clearly indicated.

In the case of an independent sewage disposal system, the approval of the plans for the proposed system by the State Department of Health is required before the approval of the Commissioner of Education covering the entire project can be issued. The requirement applies both to a new building and to an addition which increases either the pupil capacity of the building or the number of sanitary fixtures. Health Department approval of swimming pools is also required. The architect or engineer should get in touch with the local sanitary engineers of the State Health Department early in the advancement of his plans. We recommend a minimum of 30 days for the State Health Department review and another 30 days for the contractors to prepare bids.

Approval by the Air Pollution Control Board, a division of the State Health Department, is also necessary on projects containing boilers with a rated input capacity of one million BTU's per hour, or more, and for any kind of incinerator before the Commissioner's approval can be given. An application together with plans and specifications covering the heating and incinerating design should be sent to the appropriate State Health Department Agency before the final plans and specifications and the Application for Examination and Approval of Final Plans and Specifications (EFP-F) is sent to the Division of Educational Facilities Planning. Not until this Division receives notice from the State Health Department of their acceptance of the heating and incinerating design can final approval be given by the Commissioner of Education.

This applies to any other type of installation capable of polluting the atmosphere. The installation of a spray booth in a vocational shop, for example, will also require the approval of the State Health Department.

Later, when the Certificate of Completion and Acceptance of Building (EFP-CC) is sent to this Division, it should be accompanied by a final approval given the owner by the State Health Department after operating tests have proven the new installation meets smoke pollution standards.

Copies of all plans and specifications, applications, evaluation forms, reports, etc. which are submitted by the architect or engineer to the Division of Educational Facilities Planning should be filed with the Board of Education and superintendent or district superintendent of schools.

Contracts shall not be let nor work begun until plans and specifications have been approved by the Commissioner of Education as required under section 408 of the Education Law.

COMPLETE LIST OF FORMS REQUIRED ON EACH PROJECT

1.	Application for Examination and Approval of a School Site	EFP-S
2.	Architect's Contract	———
3.	Evaluation Form (On Existing Buildings)	EFP-E
4.	Application for Examination and Approval of Preliminary Plans	EFP-P
5.	Application for Examination and Approval of Final Plans and Specifications	EFP-F
6.	Supplemental Cost Data	EFP-C
7.	Addenda and Change Orders	———
8.	Certificate of Completion and Acceptance of Building	EFP-CC

Copies of the Supplemental Cost Data Form (EFP-C) will be sent to the district with the Commissioner's approval of the final plans and specifications. On one copy of the four forms sent will be listed the rated capacity as computed by the Division of Educational Facilities Planning. Upon this rated capacity will be computed the amount of State aid.

On new buildings (but *not* new buildings built as additions to existing units) the architect is required to complete these forms and distribute them according to the instructions given in the form heading. The rated capacity, as computed by this Division, should be shown on all the forms along with the rest of the information filled in by the architect. From the form returned to this Division will come some of the statistical reports mandated by the Legislature as well as the construction cost sheets sent to the school boards, architects, and engineers. This form should be completed and returned within 2 weeks after the contracts are signed so that the processing of State aid will not be delayed.

For additions, alterations, and separate site projects, a letter from either the Board of Education or the architect is required indicating that contracts have been signed, and listing the dates and amounts of the contracts together with the accepted alternates.

APPENDIX IV b

ADVANCEMENT OF PLANS FOR MINOR PROJECTS

To expedite the advancement of small projects (usually repairs, replacements, and alterations) on which the Commissioner's approval is necessary, the information given here should be found helpful.

For some of the smaller projects, plans need be only simple pencil sketches drawn to scale and the specifications only a brief description of the work to be done and the materials to be used. In some instances no plans will be necessary, just a specification, or even a catalog description.

It is important to bear in mind that plans and specifications (when required) must be submitted *in duplicate with one set of plans black on white.* Cover sheets of each specification and each drawing sheet must be sealed and signed by the architect or engineer. This material shall be accompanied by two executed copies of an "Application for Examination and Approval of Final Plans and Specifications" (Form EFP-F). Copies of this form may be secured from the Division of Educational Facilities Planning.

This approval form, EFP-F, was designed primarily for major projects. Fill in only the blanks which are applicable to your project. Be sure that all financial information requested is given and that the application is signed by the board president (chairman of board of trustees or sole trustee), the Superintendent (city, village, or district), and signed and sealed by the architect or engineer.

Prepare five copies of the application form. Keep one for the district's files, send one to the (district) superintendent, submit two to the Division of Educational Facilities Planning, and keep one for the architect or engineer, if any. (In cities and village superintendencies, four copies only will be needed, one for the superintendent, two for the Division of Educational Facilities Planning, and one for the architect.)

Section 408 of the Education Law and rulings of the Commissioner provide that plans and specifications for all school building projects costing $100,000 or more must be approved by the Commissioner of Education. This section of the law does not apply to cities over 125,000.

According to section 7307 and section 7208 of the Education Law, an architect or engineer is not required for structures costing less than $10,000 unless structural or public safety is involved. Projects that involve safety must meet the Division's safety standards as outlined in section 409 of the Education Law.

Again, make sure that the application, plans, and specifications are submitted *in duplicate, with one set of plans black on white.*

If the project is to be done by contract and involves an expenditure of more than $2,500, the contract must be awarded to the lowest responsible bidder.

All purchase contracts involving an expenditure of more than $1,000 must be awarded to the lowest responsible bidder (section 103, subdivision 1, General Municipal Law).

DIVISION OF EDUCATIONAL FACILITIES PLANNING

REFERENCE MATERIAL

No.	Title
1.	*Designing the School Plant as a Community Center*
2.	*Heating and Ventilating Recommendations for New York State Schools*
3.	*Planning the School Health Suite*
4.	*Planning the Elementary School Plant*
5.	*Planning Building Facilities for Vocational Agriculture*
6.	*Planning the Central School Library*
7.	*Planning the Indoor Physical Education Facilities*
8.	*Planning Schools for Use of Audio-Visual Instructional Material*
9.	*Planning the Music Suite*
10.	*Planning the Outdoor Physical Education Facilities*
11.	*Sanitary Facilities in School Buildings*
12.	*Manual of Planning Standards*
13.	*Visual Comfort and Efficiency in School Buildings*
14.	*School Site and Development of School Grounds*
15.	*Planning the School Auditorium*
16.	*Planning the School Lunchroom*
17.	*School Building Projects, A Guide to Administrative Procedures*
18.	*A Planning Guide for Vocational-Industrial Technical Building Facilities for Comprehensive High Schools*
19.	*Planning the Science Facilities for Central Schools*
20.	*Planning and Equipping the Homemaking Department*
21.	*Planning Facilities to Accommodate Adult Education*
23.	*Planning the Art Room for Secondary Schools*

APPENDIX VI

SCHOOL DISTRICT PUBLIC LIBRARIES

The general planning procedures and the advancement of plans through the Division of Educational Facilities Planning as outlined in this pamphlet may also apply to school district public libraries. Public library planning is, however, quite as specialized a field as the planning of a school building, and so the responsibility tends to be divided between the Board of Education and the Library Board of Trustees. Where acquisition of the site and construction of the building is to be financed by school district funds* the school district Board of Education has these responsibilties:

1. To construct the building and hold title.
2. To issue bonds authorized at a school meeting by the affirmative vote of the school district voters.
3. To inform themselves on the needs of the public library to ensure that the building and site are adequate and suitable.
4. To turn over possession and control of the building to the library board for "life" use.
5. To hold the construction moneys in the school district treasury and approve vouchers for their expenditure.

The public library Board of Trustees has these responsibilities:

1. To make, or have made by a competent library building consultant, a careful and objective study of the public library needs of the school district.
2. To ensure that building plans to meet these needs contain suitable and adequate accommodations and to choose a suitable site conforming to generally accepted public library standards.
3. To inform the Board of Education and the voters of the school district as to the needs of the public library and the plans for meeting these needs.
4. To request that the school district arrange financing of planning and construction.
5. To operate the public library building as long as required, and then return it to the Board of Education when no longer needed.

The Division of Library Extension of the State Library assists in various ways; the Division will:

1. Recommend generally accepted standards for choosing a site and planning an adequate public library building.
2. Provide advice and materials to assist in planning.
3. Review studies and plans and make suggestions on request.

---

*In the event the library can finance without a school district bond issue and from funds of the library, planning and construction would be under the jurisdiction of the trustees of the library.

4. Accept applications for a Federal grant under the Library Services and Construction Act, as long as such Federal funds are made available.
5. Work with the Division of Education Facilities Planning as requested to ensure the adequacy and efficiency of school district public library buildings. The Division of Educational Facilities Planning should, as with school buildings, review the plans for health, comfort, and safety. When Federal aid is involved, approval of the Commissioner of Education is required.